

(FILE 'HOME' ENTERED AT 11:48:25 ON 17 DEC 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 11:48:34 ON 17 DEC 2002

L1 3494245 S NUCLEIC OR PROBE OR OLIGO? OR DNA OR RNA OR MRNA  
L2 351466 S IMMOBILIZ? OR ARRAY OR MICROARRAY OR BIOCHIP  
L3 104124 S CARBOXYL  
L4 303 S L1 (P) L2 (P) L3  
L5 159 DUP REM L4 (144 DUPLICATES REMOVED)  
L6 13 S L5 AND (WATER OR AQUEOUS)

=>

| L Number | Hits   | Search Text   | DB                 | Time stamp       |
|----------|--------|---|--------------------|------------------|
| 1        | 166    | whisenant-e\$.xa.xp.  | USPAT              | 2002/12/17 10:34 |
| 2        | 321    | whisenant-e\$.xa. or whisenant-e\$.xp.  | USPAT              | 2002/12/17 10:35 |
| 4        | 101    | (whisenant-e\$.xa. or whisenant-e\$.xp.) and<br>(array or biochip or microarray)  | USPAT              | 2002/12/17 10:35 |
| 5        | 0      | (whisenant-e\$.xa. or whisenant-e\$.xp.) and<br>(hydrophobic)   | USPAT              | 2002/12/17 10:35 |
| 6        | 56     | (whisenant-e\$.xa. or whisenant-e\$.xp.) and<br>(hydrophobic)   | USPAT              | 2002/12/17 10:42 |
| 7        | 0      | wo9841531   | DERWENT            | 2002/12/17 10:42 |
| 8        | 1      | "9841531"   | DERWENT            | 2002/12/17 10:42 |
| 9        | 1      | 1999-023988.NRAN.   | DERWENT            | 2002/12/17 10:44 |
| 10       | 310393 | array or microarry or biochip   | USPAT;<br>US-PGPUB | 2002/12/17 10:45 |
| 11       | 567041 | negative or hydrophobic or hydrophilic  | USPAT;<br>US-PGPUB | 2002/12/17 10:45 |
| 13       | 9      | ((array or microarry or biochip) same<br>carboxyl) same maleimide   | USPAT;<br>US-PGPUB | 2002/12/17 10:46 |
| 12       | 149    | (array or microarry or biochip) same<br>carboxyl  | USPAT;<br>US-PGPUB | 2002/12/17 11:39 |
| 14       | 68271  | cysteine or "sodium dodecyl sulfate" or EPPS<br>or "alkaline solution" or "hydrogen sulfate"  | USPAT;<br>US-PGPUB | 2002/12/17 11:40 |
| 16       | 1      | (cysteine or "sodium dodecyl sulfate" or<br>EPPS or "alkaline solution" or "hydrogen<br>sulfate") same (array or microarry or<br>biochip) same negative | USPAT;<br>US-PGPUB | 2002/12/17 11:40 |
| 15       | 205    | (cysteine or "sodium dodecyl sulfate" or<br>EPPS or "alkaline solution" or "hydrogen<br>sulfate") same (array or microarry or<br>biochip)               | USPAT;<br>US-PGPUB | 2002/12/17 11:42 |
| 17       | 33     | (cysteine or "sodium dodecyl sulfate" or<br>EPPS or "alkaline solution" or "hydrogen<br>sulfate") near8 (array or microarry or<br>biochip)              | USPAT;<br>US-PGPUB | 2002/12/17 11:42 |

L6 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2002 ACS  
 ACCESSION NUMBER: 2000:260506 CAPLUS  
 DOCUMENT NUMBER: 132:289570  
 TITLE: Substrate to be used for immobilization of DNA for the  
 preparation of DNA chips  
 INVENTOR(S): Tanga, Michifumi; Takahashi, Kojiro  
 PATENT ASSIGNEE(S): Toyo Kohan Co., Ltd., Japan  
 SOURCE: PCT Int. Appl., 17 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|---|------|----------|-----------------|----------|
| WO 2000022108   | A1   | 20000420 | WO 1999-JP5712  | 19991015 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |      |          |                 |          |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |          |
| AU 9961238  | A1   | 20000501 | AU 1999-61238   | 19991015 |
| EP 1122309  | A1   | 20010808 | EP 1999-947929  | 19991015 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO   |      |          |                 |          |

PRIORITY APPLN. INFO.: JP 1998-293480 A 19981015  
 WO 1999-JP5712 W 19991015

AB Provided are substrates for immobilizing DNAs to present DNA libraries, which substrates are usable in replicating DNAs by DNA amplification reactions on chips. The substrates are selected from diamond contg. non-diamond carbon, amorphous carbon, plastic carbon, and graphite. Further, the surface or the substrates is modified by bonding with terminal hydroxyl groups or carboxyl groups. The carboxyl groups are bonded to the surface via ester or peptidyl linkage. The substrates improve the accuracy of temp. control and thus reduce the DNA contamination. In case of contamination, the surface of the substrates can be treated by hydrolysis reactions for recycling. Prepn. of a diamond disk contg. non-diamond C in gaseous phase by the microwave plasma CVD method, treatment of the disk with the microwave-excited oxygen plasma, and substitution with water vapor to obtain hydroxyl groups on the surface were described.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT